

REMARKS/ARGUMENTS

The specification has been amended to remove information that is no longer relevant to the claims as currently amended.

Claims 8 and 11 are objected to due to a mistake in claim wording. Claim 8 as been amended to correct the deficiency. Claim 11 is currently withdrawn. Claim 10 is objected to as depending on itself. This error has also been corrected.

Claims 1, 2 and 5 are rejected under USC 102 as being anticipated by Bayley (US 6182783 B1). As to claim 1, Bayley discloses corresponding elements to those of Applicants claim 1 as originally presented. It is assumed that the examiner does not feel that the functional limitations in the original claim 1 distinguish from Bayley.

Bayley performs several steps in response to a rollover signal from a roll sensor. He teaches rolling up power windows, and adjusting the suspension of the vehicle to lower the center of gravity. Relevant to Applicants invention, Bayley also initiates the tensioner in a pre-tensioned seatbelt as well as initiating a power seat height adjuster (motor) to lower the seat.

Applicants believe that the single most effective step that can be taken to improve rollover safety is to move vehicle occupants as far away from the roof as possible. Applicants are aware of approaches such as Bayley which attempt to lower the seat vertically, as discussed in Applicants' paragraph 2, where it is stated that such an approach may be effective for truck cabs, but does not produce enough separation for the majority of automobile designs. Thus it is highly desirable to recline the seat, as discussed in Andersson (US 6076887). However, Anderson does not disclose or suggest a way to recline a seat which is compatible with power adjustment seats.

Since the reclining of a seat is a much larger motion than vertical positioning, and therefore delivers much higher head-roof separation, the reclining motion needs to happen quickly in order to take place fast enough to move occupant's head away from the roof before the roof crushes in most rollover scenarios. As clearly stated in Applicants description, the normal

operation of a seat reclining motor does not happen quickly enough. Moreover, if other seat positioning operations, such as vertical height, forward-backward position are used to optimize the occupant position during a rollover, it is desirable that the other motions happen more quickly than normal adjustment operation will accomplish.

However, it is difficult to get new designs implemented in automobiles, even if the new designs enhance safety. So to provide a safety solution that has a reasonable chance of adoption, the solution should be capable of implementation with a minimum of design change to the vehicle. The key distinction of applicant's invention is that it both provides the necessary high speed positioning and is easily implemented in existing seat designs.

The reason applicant's invention can be so easily implemented, is that it uses an element already in place, the seat adjustment motors. However it replaces or modifies those motors such that they can be operated in a normal adjustment mode (slow) other than during a rollover condition during which the motors must be capable of a high speed mode in order to meet the requirements of positioning the occupant before roof crush.

Thus the additional elements of a motor capable of operation in both a low power, slower normal mode, and a high power, faster safety mode, as well as a high power motor driver for the safety mode are not in any way disclosed or suggested in Bayley. Since Bayley only discusses moving the seat vertically, which is a small excursion, he never addresses the concept of higher speed. However, Applicants believe that higher speed is desirable even if vertical positioning is the only seat move contemplated

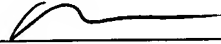
Since appropriate motors and supplemental motor drivers can be easily integrated in existing seat designs, applicant's invention has a much better chance of adoption, and subsequent life-saving utility, than any of the cited references, which either require completely new seat designs (Anderson) or do not provide a solution to the problem of time-critical wide-excursion seat positioning (Bayley). Nor can the teaching of Andersson and Bayley be combined to suggest Applicants invention, as Andersson provides no suggestion of how to recline a powered seat, and Bayley provides no suggestion of how to adjust a powered seat quickly, both critical to adequate functionality and possibility of adoption.

Therefore claim 1 as amended to reflect the specific structural elements required for Applicants' invention, clearly is distinct from Bayley. Corresponding elements added to claim 8 for the same reasons as above, clearly are not suggested by a combination of Bayley and Andersson. Thus the 103 rejection of claim 8 should be overcome for claim 8 as amended. Claims 2-7 and 9-10 include further limitation upon claims 1 or 8.

Therefore claims 1 – 10 should be in condition for allowance at this time. Claims 11 and 12 are presently withdrawn.

Respectfully submitted,

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